

Understanding Electricity

National Energy Foundation
5225 Wiley Post Way, Suite 170
Salt Lake City, Utah 84116
(801) 539-1406



This material includes a poster depicting a school and its electricity use, two booklets containing activities for teaching about electricity, and some student handouts. (30 pages + poster; \$13; 1989.)

REPORT CARD

grades 1-6

Teaching and LearningB-

Presentation and
OrganizationB

Energy Content C

Disciplines:

Language Arts
Math
Science
Social Studies

Teaching and Learning: Energy information is presented accurately, otherwise this material scored average. Values are not addressed in relation to energy use. The materials are good in both urban and rural settings.

Presentation and Organization: The organization is clear and easy to use. There is little help for further investigation of the topic area. Nice illustrations.

Energy Content: This material covers various energy sources well but does not discuss basics like energy flow or thermodynamics. Good explanation of personal and societal roles.

Teachers' Thoughts: Everyone really loved the poster that comes with the material and felt the activities could be a supplement to an elementary unit on energy. The failure to mention renewable energy, conservation, and energy ethics was the shortcoming of the material.

The Energist

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(801) 539-1406



These are newspaper format publications on Oil, Nuclear Energy, Coal, Electricity, Natural Gas, Water, and Renewable Energy Sources. Each one contains short articles, activities, and paper and pencil work. 8 pages each; \$.75; 1986 & 87.)

REPORT CARD

grades 9-12

Teaching and LearningB-

Presentation and
OrganizationB

Energy Content C+

Disciplines:

Science
Social Science

Teaching and Learning: These materials were not strong on scientific process and did not mention personal values. There are different learning modes used and average connection between students' experience and the information.

Presentation and Organization: Teachers felt these could be integrated into an established curriculum. Goals and objectives are not emphasized. Suggestions for further investigations were lacking.

Energy Content: Specific energy sources are directly addressed. Energy flow and thermodynamics are not covered.

Teachers' Thoughts: Everyone loved the newspaper format and felt it would help reach non-text-oriented students. The content is dry at times and doesn't address environmental and social issues as much as several teachers would have liked.

Wind, Water, Fire and Earth

Energy Lessons for the Physical Sciences

NSTA

1840 Wilson Blvd.

Arlington, VA 22201-3000

(703) 243-7100



This is a collection of 19 classroom lessons complete with student handouts. They are designed for high school science classes. Included are activities that incorporate experiments, and some that have students do reading and research to answer questions. (124 pages, \$4.00 + \$3.75 shipping, free from some utilities; 1981.)

REPORT CARD

grades 9-12

Teaching and LearningB-

Presentation and
OrganizationB

Energy ContentC+

Disciplines:

Chemistry
Earth Science
Geology
Physics
Science
Social Studies

Teaching and Learning: These materials include good hands-on activities, accurate treatment of content, and use the scientific method. A limited number of learning modes are used. There is good depth of treatment; values are not covered.

Presentation and Organization: The materials are easy to understand and the organization is good. Further investigations are lacking.

Energy Content: Thermodynamics and energy sources are covered. The connection of energy to society and technology is not particularly strong.

Teachers' Thoughts: The breadth of energy topics covered was appreciated. Most teachers felt these lessons would be functional in the classroom. The organization was clear and the quality of experiments high. The presentation was "dense," -- too much on a page. Most of the reviewing teachers felt this would be a good teacher resource for advanced students.

Manure Meadows and Milkshakes

The Trust for Hidden Villa

26870 Moody Rd.

Los Altos, CA 94022

(415) 949-8658



This is a general environmental education guide developed and used by the environmental education program at Hidden Villa's farm and wilderness area. It includes 15+ activities related to energy. (132 pages, \$12.95+shipping; 1986.)

REPORT CARD

grades K-6

Teaching and LearningB

Presentation and
OrganizationB-

Energy ContentC

Disciplines:

Interdisciplinary

Teaching and Learning: There is a very strong connection between information and the student's life. Assessment devices are lacking here. Different learning styles are addressed and it includes lots of hands-on experiences. Especially good for primary grades.

Presentation and Organization: The materials are easy to understand and the organization is good. Student handouts are not provided.

Energy Content: Energy flow is covered but other topics are not specifically addressed.

Teachers' Thoughts: This is not designed to be energy education material specifically. There are many activities that relate to energy but this guide would not serve as your sole resource on energy. Reactions to this book were mixed. Many felt that this would be excellent material for a general environment unit and they liked the songs and drama included. This is full of great ideas but hard science information and evaluation was lacking.

Energy and Economics An Activities Book

Nebraska Energy Office
P. O. Box 95085
Lincoln, NE 68509
(402) 471-2867



This unit consists of eleven lesson plans incorporating economic concepts such as supply, demand, equilibrium, cartels, scarcity and the energy marketplace. Included are worksheets and simulation games with teacher background. (105 pages; free; 1988.)

REPORT CARD	
grades 9-12	
Teaching and Learning	B-
Presentation and Organization	C+
Energy Content	C+
Disciplines: Science Social Science	

Teaching and Learning: The learning modes are limited. There is a strong connection between the student's life and the material. The knowledge is related to individual values and society, not good in rural setting.

Presentation and Organization: The teacher's instructions and goals are fairly clear. Illustrations are lacking and writing is dry.

Energy Content: Long-term benefits and costs are explored and student conservation is included. Weak on thermodynamics and energy flow.

Teachers' Thoughts: Great for an economics class only. The presentation was dry and not easy to use. Teachers felt that it would require a lot of their time to prepare for the lessons, and that students would need to be advanced. The content is good but not very accessible.

Know Nukes: Controversy in the Classroom

Antioch/New England Graduate School
Department of Environmental Studies
103 Roxbury Street
Keene, NH 03431
(603) 357-3122



The authors are concerned with producing an approach to science that integrates controversial issues. Included in each lesson is a lot of background information which is then covered in depth with either debates, written questions or other problem-solving exercises. (259 pages; \$17.50, free from some utilities; 1985.)

REPORT CARD	
grades 9-12	
Teaching and Learning	B-
Presentation and Organization	B-
Energy Content	C+
Disciplines: Science Social Science	

Teaching and Learning: The discussions relate energy to daily living. There are few hands-on activities. The materials are grade-level appropriate, include values, and can be used in both urban and rural environments.

Presentation and Organization: The teacher's instructions are clear and the goals are fairly clear. Suggestions for further investigations were lacking.

Energy Content: Personal energy use is well-addressed, and energy flow through an ecosystem is covered. The laws of thermodynamics are not clearly related to the rest of the material. There are no practical energy conservation lessons.

Teachers' Thoughts: If anyone wants to teach a unit on nuclear energy, this would be a great resource. Teachers felt the role-playing exercises would inspire the students. There is a lot of boring paper-and-pencil type of work included. Teachers were unsure how these materials would fit into an established curriculum.